

IEEE 1722b PAR Draft

Initial Draft for Working Group Review

****EVERYONE PLEASE COMMENT!****

Gordon Bechtel

2019-10-27

IEEE 1722b – Possible Work Items – as of 2019-10-22

- Add support for:
 - MIPI CSI2/DSI2 (video)
 - Gordon Bechtel, Bechtech; Roy Myers, Ethernovia; Don Pannell, NXP
 - http://grouper.ieee.org/groups/1722/1/contributions/2018/1722_csi2FormatCallForInterest-Bechtech-2018-12-04.pdf
 - Temporally Redundant Audio over WiFi
 - Ashley Butterworth, Apple
 - http://grouper.ieee.org/groups/1722/contributions/2017/Butterworth_AVTP_TRAF.pdf
 - H.265 (video)
 - Frank Baehren, Intel; Kieran Tyrrell, Sienda; & Ashley Butterworth, Apple
 - http://grouper.ieee.org/groups/1722/contributions/2017/Butterworth_AVTP_HVEC.pdf
 - AV1 *Consensus is to include AV1 in the PAR and then investigate further to decide if we'd like to actually include it in the standard.*
 - Improve Clock Reference Stream Format
 - Frank Baehren, Intel
 - http://grouper.ieee.org/groups/1722/contributions/2019/1722b_fbaehren_CRF_Proposal.pdf

IEEE 1722b – Possible Work Items – Page 2

- Add support for:
 - Header improvements:
 - gPTP GM Identity and Expansion of avtp_timestamp to a full 64-bits of nanoseconds
 - Ashley Butterworth, Apple
 - http://grouper.ieee.org/groups/1722/contributions/2019/Butterworth_AVTP_Ver1Header.pdf
 - Include clarification/background on use of the tu bit and its meaning for clock stability. – Marc Illouz
 - *Consensus is to include it in the PAR for now and decide later whether or not to include it in the actual standard.*
 - How do new .1AS-2020 features fit into 1722??
 - This working group does not intend to address any new features unless a presentation with a specific idea is brought to the group.
 - Radar Object Data
 - Don Pannell, NXP
 - **!Don!** Presentation?? The working group needs a presentation in order to consider this format for the PAR.
- Update the doc (where needed) for:
 - 802.1AS-2020 (aka., 802.1AS-Rev) References
 - MAAP is now included in P802.1CQ/D0.3, annex B.
 - Would need to allocate a range of EtherType SubTypes for their use in our doc.
 - Update 1722 to be compatible with 802.1 CQ.

Draft PAR (Section 1)

- 1.1 Project Number: P1722b
- 1.2 Type of Document: Standard
- 1.3 Life Cycle: Full Use

Draft PAR (Section 2)

- 2.1 Title: IEEE Standard for Layer 2 Transport Protocol for Time Sensitive Applications in a Bridged Local Area Network Amendment 2 – New and Extended Streaming Formats
- *Discussion:*
 - *Stick with amendment and not a full revision.*
 - *Keep work on 1722b reasonably small and move on quickly to 1722c, 1722d, ...*
 - *Keep a list of potential work item in Annex Z, like 802.1Q.*

Draft PAR (Section 3)

- **3.1 Working Group: Audio/Video Bridging Layer2 Transport (C/MSD/P1722) Contact Information for Working Group Chair**
 - Name: David Olsen??
 - Email Address: dolsen@harman.com Phone: (801) 568-7688
- Contact Information for Working Group Vice-Chair
 - ??
- **Sponsoring Society and Committee: IEEE Computer Society/Microprocessor Standards Committee (C/MSD) Contact Information for Sponsor Chair**
 - Name: James Davis??
 - Email Address: bob@scsi.com?? *(Please check. "Bob" is rarely a nickname for "James")*
 - Phone: 408-353-2706/408-857-1273 Cell??
- Contact Information for Standards Representative
 - ??

Draft PAR (Section 4)

- **4.1 Type of Ballot:** Individual
- **4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot:** Dec2021??
- **4.3 Projected Completion Date for Submittal to RevCom:** Jun2022??

- Discussion
 - Craig: Best to set long dates and finish early. 2 years is a good rule of thumb. RevCom is about 6 months past the draft submission.

Draft PAR (Section 5)

- **5.1 Approximate number of people expected to be actively involved in the development of this project:** 20
- **5.2 Scope:** This standard specifies extensions to IEEE 1722-2016 to add new formats and extend existing streaming formats to support media types not included in the previous standard. This standard will also improve support for tracking grandmaster changes, longer presentation time intervals, and clarification of clock stability indicators.
- **5.3 Is the completion of this standard dependent upon the completion of another standard:** Yes??
 - *Discussion:*
 - *Gordy: It appears to be dependent on getting public access to the MIPI CSI/DSI standard.*
- **5.4 Purpose:** This standard facilitates interoperability between stations that stream time-sensitive media across wired and wireless LANs providing time synchronization and latency/bandwidth services by defining additional packet format protocols and improving synchronization mechanisms.

Draft PAR (Section 5, cont'd)

- **5.5 Need for the Project:**

- IEEE 1722 - 2016 has experienced rapid adoption in applications that stream audio/video. There is significant end-user and vendor interest in providing additional media formats that are not currently in the IEEE 1722 defined set of supported formats. These new media formats address support for common raw and compressed video formats, redundant audio and improvements to media clock distribution and recovery.
- The project would also enhance/improve distribution of grandmaster clock and timing information.
- These additional features and formats are necessary to ensure growth of interoperable vendor support for time-sensitive media transport.

- **5.6 Stakeholders for the Standard:** Developers and users of bridged LAN and end-point systems supporting audio/video and other time-sensitive streaming applications.

Draft PAR (Section 6)

- Intellectual Property

- 6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: No??
- 6.1.b. Is the Sponsor aware of possible registration activity related to this project?:
No??

Draft PAR (Section 7)

- 7.1 Are there other standards or projects with a similar scope?: No
- 7.2 Joint Development: Is it the intent to develop this document jointly with another organization?: No??
 - *Discussion:*
 - *Gordy: Would the CSI/DSI format require joint development with MIPI?? I don't think so. It probably requires a communications liaison, but not a formal joint standards development. Does the group agree??*